

## Material Safety Data Sheet

Section1. Product Information and Company Identification			
Product name	Aluminum chloride anhydrous		
Mol.formula	AlCl <sub>3</sub>	CAS NO	7446-70-0
Mol.wt	133.4 g/mol		
Manufacture name	Pioneers for laboratory chemicals		
Brand name	Piochem		
Address	Area 540, Industrial Zone 6th October city Giza, Egypt.		
Website	www.piochem.com		
E-mail	info@piochem.com		
Phone number	+201225728304 , +201023932115		

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Skin corrosion (Category 1B), H314

Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Lungs, H372

Specific target organ toxicity - repeated exposure, Oral (Category 2), Central nervous system, H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 Label elements

##### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word  
Hazard statement(s)  
H314  
H372  
  
H373

Danger  
  
Causes severe skin burns and eye damage.  
Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled.  
May cause damage to organs (Central nervous system) through

prolonged or repeated exposure if swallowed.

Precautionary statement(s)	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
Supplemental Hazard Statements	none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.  
Reacts violently with water.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula	:	AlCl <sub>3</sub>
Molecular weight	:	133.34 g/mol
CAS-No.	:	7446-70-0
EC-No.	:	231-208-1
Index-No.	:	013-003-00-7

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
<b>Aluminium chloride anhydrous</b>			
CAS-No.	7446-70-0	Skin Corr. 1B; STOT RE 1; STOT RE 2; H314, H372, H373	<= 100 %
EC-No.	231-208-1		
Index-No.	013-003-00-7		

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **5.2 Special hazards arising from the substance or mixture**

Hydrogen chloride gas, Aluminum oxide

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. Vent periodically. Handle and open container with care.

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protective equipment**

##### **Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If the full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

a) Appearance	Form: powder Colour: light yellow
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	2.4 at 100 g/l at 20 °C
e) Melting point/freezing point	Melting point/range: 190 °C - lit.
f) Initial boiling point and boiling range	187.7 °C at 1003 hPa
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	1.00 mmHg at 100 °C < 1.00 mmHg at 20 °C
l) Vapour density	No data available
m) Relative density	2.4400 g/cm <sup>3</sup>
n) Water solubility	soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

**9.2 Other safety information**

Bulk density	1,200 kg/m <sup>3</sup>
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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

Avoid moisture.

### **10.5 Incompatible materials**

Strong oxidizing agents, Alcohols, Mixtures of nitrobenzene and aluminum chloride are thermally unstable and may lead to explosive decomposition due to a multi-step decomposition reaction occurring above 90 degrees C, which self-accelerates with high exothermicity producing azo- and azoxypolymers.

### **10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Aluminum oxide  
Other decomposition products - No data available  
In the event of fire: see section 5

## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - Rat - 3,450 mg/kg(Aluminium chloride anhydrous)

#### **Skin corrosion/irritation**

#### **Serious eye damage/eye irritation**

Eyes - Human(Aluminium chloride anhydrous)  
Result: Severe eye irritation

#### **Respiratory or skin sensitisation**

- Guinea pig(Aluminium chloride anhydrous)

Result: Did not cause sensitisation on laboratory animals.  
(Maximisation Test)

#### **Germ cell mutagenicity**

No data available(Aluminium chloride anhydrous)

#### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### **Reproductive toxicity**

Laboratory experiments have shown teratogenic effects.(Aluminium chloride anhydrous)

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.(Aluminium chloride anhydrous)

#### **Specific target organ toxicity - single exposure**

No data available(Aluminium chloride anhydrous)

#### **Specific target organ toxicity - repeated exposure**

Oral - The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2. - Central nervous system

Inhalation - The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1. - Lungs

#### **Aspiration hazard**

No data available(Aluminium chloride anhydrous)

## Additional Information

RTECS: BD0525000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, prolonged or repeated exposure can cause:, Damage to the lungs.(Aluminium chloride anhydrous)

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	static test LC50 - Salmo gairdneri - 36.6 mg/l - 96 h(Aluminium chloride anhydrous)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 27.3 mg/l - 48 h(Aluminium chloride anhydrous) (EG 84/449)
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae) - 0.57 mg/l - 96 h(Aluminium chloride anhydrous)

### 12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available(Aluminium chloride anhydrous)

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Harmful to aquatic life.

No data available

Harmful to aquatic life.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 1726

IMDG: 1726

IATA: 1726

### 14.2 UN proper shipping name

ADR/RID: ALUMINIUM CHLORIDE, ANHYDROUS

IMDG: ALUMINIUM CHLORIDE, ANHYDROUS

IATA: Aluminium chloride, anhydrous

### 14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

**14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**

No data available

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried

out